

42V, 6A Synchronous Step-Down Silent Switcher with 2.5 $\mu$ A Quiescent Current with External Compensation

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	LQFN-24
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for LT8643SEV#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The LT8640S-2/LT8643S-2 synchronous step-down regulator features Silent Switcher architecture designed to minimize EMI emissions while delivering high efficiency at high switching frequencies. Peak current mode control with a 30ns minimum on-time allows high step-down ratios even at high switching frequencies. The LT8643S-2 has external compensation to enable current sharing and fast transient response at high switching frequencies.

Burst Mode operation enables ultralow standby current consumption, forced continuous mode can control frequency harmonics across the entire output load range, or spread spectrum operation can further reduce EMI emissions.

### Applications

Automotive and Industrial Supplies

General Purpose Step-Down

## Features

Silent Switcher® Architecture

Ultralow EMI Emissions

Optional Spread Spectrum Modulation

High Efficiency at High Frequency

Up to 96% Efficiency at 1MHz, 12VIN to 5VOUT

Up to 95% Efficiency at 2MHz, 12VIN to 5VOUT

Wide Input Voltage Range: 3.4V to 42V

6A Maximum Continuous, 7A Peak Output

Ultralow Quiescent Current Burst Mode® Operation

2.5µA IQ Regulating 12VIN to 3.3VOUT (LT8640S-2)

Output Ripple < 10mVP-P

External Compensation: Fast Transient Response and Current Sharing (LT8643S-2)

Fast Minimum Switch On-Time: 30ns

Low Dropout Under All Conditions: 100mV at 1A

Forced Continuous Mode

Adjustable and Synchronizable: 200kHz to 3MHz

Output Soft-Start and Tracking

Small 24-Lead 4mm × 4mm LQFN Package

## Application

Automotive and Industrial Supplies

General Purpose Step-Down



### Related Products



[LT3763EFE](#)

Analog Devices, Inc  
TSSOP28



[LT1038CK](#)

Analog Devices, Inc  
TO-3



[LTC4417IUF](#)

Analog Devices, Inc  
QFN-24



[LTC3440EMS](#)

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MSOP10



[LTC1966CMS8#PBF](#)

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MSOP-8P



[LTC2990IMS#PBF](#)

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[LTM8045EY#PBF](#)

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BGA40



[LT4295IUFD#PBF](#)

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28-WFQFN